**Java Workshop Examples:**

**Lesson 1: Setting up class and main method**

What is a class? A class is the basic building block of Java, it is a template that holds the data and behavior of the program.

What is a main method? A main method is an entry point to start the execution of a program. Every program requires a main method!

Follow the Example below to set up your own class and main method.

public class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ {

Name of your program

Notice all the brackets, for every open bracket, there is a closed bracket. This is important!

public static void main(String[] args) {  
   
   
   
 }  
  
}

**Lesson 2: How to make Print statements**

What is a print statement? A print statement allows you to tell the program what you want it to say. You can make it say whatever you want, just stick to the following format:

System.out.println(“ “);

* In between the quotations is where you would put your statement.

\*\*\*NOTE: At the end of every line of code, unless it has a bracket at the end of the line, it needs a semicolon!

Look at this example to see how I included a print statement in my program. You can include multiple print statements in your Java program, so have fun with it!

public class Practice {  
  
 public static void main(String[] args) {  
   
 System.out.println("Hello World");  
   
 }  
  
}

Example of a Print Statement

**Lesson 3: Variables**

What are variables? Variables are locations in memory in which values can be stored. They can have a type, name, and value.

The main types of variables we will use are called int (whole numbers), double (decimal numbers) and String (message).

To declare a variable, we can give it a type and a name.

Examples:

* int age
* double hours
* String message

To assign values to variables, you can set it equal to a value.

Examples:

* int age = 15
* double hours = 3.5
* String message = “I love pizza!”

What can you use variables for? You can use variables in math equations in Java, but you can also use them in many other things.

Take a look at the example below to see how I assigned values to two variables, and then used them in a math equation!

public class Practice {  
  
 public static void main(String[] args) {  
   
 int myAge = 15;  
 int sisterAge = 13;  
 int totalAge;  
   
 totalAge = myAge + sisterAge;  
   
 System.out.println("Your ages combined are " + totalAge + " years.");  
   
 }  
  
}

**Lesson 4: Input**

If you want to be able to give your user prompts, you can do so by the following.

Input:

To have your user be prompted with an input box, do the following:

* Declare a string variable
* Assign it the following value: JOptionPane.showInputDialog(null, “Your Question here” );
* Then, to have the user’s input value saved in the variable, write:

int number = Integer.parseInt(response);

Look at the Example below:

import javax.swing.JOptionPane;  
  
public class Practice {  
  
 public static void main(String[] args) {  
   
 String response;  
 response = JOptionPane.showInputDialog(null, "What is your favorite number?");  
 int number = Integer.parseInt(response);  
   
 }  
  
}

**Lesson 5: Output**

Instead of in the little tiny output box in JGrasp, you can have information pop up into a message box on the screen. To do that, follow the instructions below:

* Simply type on a new line:
  + JOptionPane.showMessageDialog(null, “Whatever you want it to say here.”);

The example below is the same code as the example above, but it inserts a line that will give the user a message box saying, “your favorite number is …”

import javax.swing.JOptionPane;  
  
public class Practice {  
  
 public static void main(String[] args) {  
   
 String response;  
 response = JOptionPane.showInputDialog(null, "What is your favorite number?");  
 int number = Integer.parseInt(response);  
   
 JOptionPane.showMessageDialog(null, "Your favorite number is " + number);  
   
 }  
  
}